



October 21, 2005

Mr. Randy Duplechain
Davis, Bowen & Friedel, Inc.
23 North Walnut Street
Milford, DE 19963

RE: PLUS review – PLUS 2005-09-07; Kesselring Property

Dear Mr. Duplechain:

Thank you for meeting with State agency planners on September 28, 2005 to discuss the proposed plans for the Kesselring property project to be located west of the railroad along New Burton Road in Dover.

According to the information received, you are seeking a rezoning of 182 acres from R20 to R8. In addition, you are seeking subdivision approval for 326 homes. This PLUS review considered both the rezoning and the subdivision plan presented for our review.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as the City of Dover is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the City.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The

full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

- This project is located primarily in Investment Level 1, which represents the State's highest priority for new development, infill, and redevelopment. The State has no objections to the rezoning of the property or its eventual development for residential uses.

Street Design and Transportation

- The parcel is impacted by the ongoing West Dover Connector study. A range of alternative alignments for a new road connection are being considered, some of which may require right-of-way from this parcel. It is premature to consider a subdivision plan on this parcel until the conclusion of the West Dover Connector study.
- Access to this parcel is problematic. The only definite access point is through an existing subdivision street, which does not appear to be designed to serve as the primary access point for such a large subdivision. It will be necessary to work closely with the City of Dover and DelDOT to assure that adequate access to the subdivision is provided.
- A Traffic Impact Study is warranted.

Natural and Cultural Resources

- The parcel contains a historic farmhouse and outbuildings. These resources may be impacted by future road construction. If they are not, the developer is encouraged to retain the historic structures on a larger lot in the development.
- The northern portion of the parcel is adjacent to the Puncheon Run, and likely includes sensitive riparian wetland areas. Wetland areas should be preserved, and a riparian buffer of at least 100' is recommended.
- Preservation of the existing forested area along the Puncheon Run as a part of and in addition to the buffer is also recommended. The forested will provide water quality benefits, and may also contain rare and endangered wildlife species.

The following are a complete list of comments received by State agencies:

Office of State Planning Coordination – Contact: David Edgell 739-3090

This project is located in Investment Level 1 according to the *Strategies for State Policies and Spending*. A small portion of the southern portion of the parcel is located in Investment Level 2. This site is also located in the City of Dover. Investment Levels 1 and 2 reflect areas that are already developed in an urban or suburban fashion, where infrastructure is existing or readily available, and where future redevelopment or infill projects are expected and encouraged by State policy.

Our office has no objections to the proposed rezoning of this parcel from R-20 to R-8, or to the eventual development of this parcel for residential purposes. This rezoning appears to be consistent with Dover's certified Comprehensive Plan.

Our office does have concerns related to the proposed subdivision plan. The subdivision plan impacts an area that is currently being studied for a potential new road connection, known as the "West Dover Connector." DelDOT has convened a working group, containing local residents and stakeholders, to review alternatives for this potential road connection. The study is ongoing, and to date no decisions have been made regarding whether or not the connector will be constructed, and if it is to be constructed what particular right-of-way will be needed for the alignment. It would be premature to approve a subdivision plan for this parcel until the West Dover Connector study has concluded, and the future alignment of the road (if any) is known and can be integrated into the subdivision plan.

More information regarding the West Dover Connector study may be found in DelDOT's comments, later in this letter. You will also note in DelDOT's comments that there is some concern regarding access to this site. Our office shares those concerns and encourages you to work closely with DelDOT and the City of Dover to ensure that there is adequate access for the proposed subdivision.

Our office has no objection with the applicant proceeding with a rezoning application at this time. However, our recommendation to the applicant and to the City is to delay consideration of a subdivision application until the West Dover Connector study has concluded.

Division of Historic and Cultural Affairs – Contact: Alice Guerrant 739-5685

This parcel contains the H. Jenkins House, as noted on Beers Atlas of 1868 (K-1030), with its agricultural outbuildings, as well as a prehistoric-period archaeological site (K-470) near the northeast corner. The only adjacent standing historic property, an agricultural complex (K-1028) on Wyoming Mill Rd., is already cut off from this parcel by current development. There may be a historic-period archaeological site associated with the Jenkins House, and there are areas on the parcel that have high and medium potential for prehistoric-period archaeological sites.

The DHCA is consulting with the Delaware Department of Transportation on the various alignment alternatives for the proposed western Dover bypass, including the alternative shown on the project plans. If this alternative is not chosen, they urge the developer to maintain the historic farm buildings on a larger lot within the development. If some or all of the buildings will be demolished, the DHCA would like the opportunity to document them before any demolition takes place, including any clearing of the trees and bushes around the buildings. They would also like an opportunity to look for archaeological sites and to determine the boundaries of the known site before any ground-disturbing activities take place.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

DelDOT has no comments on the proposed rezoning but offer the following comments on the plan presented:

- 1) DelDOT is evaluating the environmental impacts of several alternative alignments for a new roadway known as the West Dover Connector (WDC). The 150-foot wide right-of-way corridor shown reflects the alternative that would have the most impact on the subject land. DelDOT expects to decide on an alignment in the winter of 2006/2007 but they presently have no schedule for beginning construction of the road. Until DelDOT reaches a decision on the alignment of the WDC, they would urge the City not to approve a plan for the development of this property. More information on the WDC is available from the DelDOT manager for that project, Mr. John Gaines. He may be reached at (302) 760-2335.
- 2) The 150-foot wide right-of-way shown for the WDC may not be adequate for the footprint of the fill that would be needed to raise the road where it would cross over the Norfolk Southern tracks. When DelDOT has selected an alignment they will begin the engineering to determine the footprint of the fill needed for the railroad crossing.

3) The plan shows three potential access points leading to Wyoming Mill Road (Kent Road 195) and DelDOT has comments about each of them:

- a) At the north end of the property, a connection to Riverside Road in the Hidden Creek subdivision is proposed. With appropriate traffic calming measures, such a connection would be appropriate, but only as one of several access points and only if a separate access is provided for construction traffic. If the City finds it appropriate to allow an initial extension of Riverside Road into the proposed development without other access, we would recommend that it limit the number of houses that can be built until a second means of access is provided.

In determining the type and location of traffic calming measures, DelDOT would recommend that the City consult with the residents of Hidden Creek and consider the possibility of having the applicant place some of those measures on the existing street. More information on traffic calming is available at http://www.deldot.gov/static/pubs_forms/manuals/traffic_calming/DelDotFinal.pdf.

- b) A divided road, or boulevard, is proposed near the south end of the property, connecting the WDC to Wyoming Mill Road through lands of others. That road is part of an alignment DelDOT is considering for the WDC and the same issues regarding the WDC, noted in comments 1 and 2, above pertain to it as well.
- c) A 60-foot right-of-way is shown connecting from the south end of the proposed development, through lands of Papen Farms and lands of owned by the Wyoming United Methodist Church, to a point on Wyoming Mill Road directly opposite Papen Lane. The Department of Agriculture mentioned in the PLUS meeting that the Papen Farms parcel is permanently preserved from development. Further, it was identified at the PLUS meeting that the south access would involve both Kent County, for the Papen Farms parcel, and the Town of Wyoming, for the church parcel. Preliminarily, the point opposite Papen Lane can be improved to provide acceptable access. However, the City should be certain that the developer can obtain, or has obtained, the necessary right-of-way before they approve a plan that depends on it.

- 4) The proposed development is large enough to warrant a traffic impact study (TIS). We would recommend that the City withhold all plan approvals for the property until the developer has completed that TIS to DelDOT's satisfaction and has adequately addressed any requirements following from DelDOT's review of that study. The study should assume no access by way of the WDC for at least one of the "build" cases. The developer has already contacted us regarding a scoping meeting for this study and that meeting will be held on October 11, 2005.
- 5) The developer's site engineer should contact the DelDOT project manager for Kent County, Mr. Brad Herb of Johnson, Mirmiran & Thompson, regarding the specific requirements for access. Mr. Herb may be reached at (302) 266-9600.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-9071

Soils

Based on Kent County soil survey mapping Sassafras, Woodstown, and Johnston were mapped on subject parcel. Sassafras is a well-drained upland soil that, generally, has few limitations for development. Woodstown is a moderately well-drained soil of low-lying uplands that has moderate limitations for development. Johnston is a very poorly-drained wetland associated (hydric) floodplain soil that has severe limitations for development.

Wetlands

According to the Statewide Wetland Mapping Project Mapping (SWMP) maps, palustrine forested riparian wetlands were mapped along the northern boundary of subject parcel. A wetlands field delineation is highly recommended; this delineation should be verified by the U.S. Army Corps of Engineers through the Jurisdictional Determination process.

Impacts to wetlands should be avoided and vegetated buffers of no less than 100 feet should be employed from all wetlands and water bodies. Lots should exclude all wetlands and associated buffers. The developer should note that both DNREC and Army Corps of Engineers discourage allowing lot lines to contain wetlands to minimize potential cumulative impacts resulting from unauthorized and/or illegal activities and disturbances that can be caused by homeowners.

Impacts to Palustrine wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act. In addition, individual 404 permits and certain

Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the DNREC Wetland and Subaqueous Land Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process.

To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-4691 to schedule a meeting.

This project is located directly adjacent to sensitive headwater or near headwater riparian wetlands associated with Puncheon Run of the St. Jones watershed – greatly increasing the probability of harmful impacts to surface and groundwater quality of all waters within the greater Delaware Basin, and making it more difficult for the State to achieve future required TMDL nutrient reductions. Headwater streams and their associated wetlands are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system downstream. In recognition of this concern, the Watershed Assessment Section strongly recommends that the applicant consider preserving the existing natural forested buffer in its entirety. Otherwise, as mentioned previously, a 100-foot upland buffer width is the recommended minimum. Efforts to expand the existing buffer width beyond the recommended 100-foot minimum (where applicable) via plantings of native woody and herbaceous vegetation, would be greatly appreciated.

TMDLs

A Total Maximum Daily Load (TMDL) is the maximum level of pollution for which a water quality limited water body can assimilate without compromising use and recreational goals such as swimming, fishing, drinking water, and shell fish harvesting. Although TMDLs as a “pollution runoff mitigation strategy” to reduce nutrient loading have not yet been developed for the St. River watershed to date, work is continuing on their development and they should be completed by December 2006.

Therefore, until the specified TMDL reductions and pollution control strategies are adopted, it shall be incumbent upon the developer to employ best available technologies (BATs) and/or best management practices (BMPs) as “methodological mitigative strategies” to reduce degradative impacts associated with development. Reducing imperviousness, preservation and/or planting trees, and maintaining at least a 100-foot

upland buffer from all streams and wetlands are some examples of mitigative strategies to reduce nutrient runoff impacts.

Impervious Cover

Research findings have consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline below their predevelopment level. Moreover, increases in a watershed's surface imperviousness have been shown to reflect proportional decreases in water and habitat quality once this threshold is exceeded. Information compiled by the University of Delaware through analysis of 2002 aerial photography indicates that the St. Jones watershed has about 16.2 percent impervious cover. In recognition of this concern, the Watershed Assessment Section strongly recommends that applicant be environmentally proactive and implement BMPs that reduce the predictable impacts from the creation of unnecessary surface imperviousness. Planting/preservation of trees (especially when adjacent to wetlands/water bodies), and the use of pervious paving surfaces ("pavers") in lieu of asphalt or concrete – are examples of practical BMPs to reduce such impacts.

Water Supply

The project information sheets state water will be provided to the project by the City of Dover via a central water system. Our records indicate that the project is located within the public water service area granted to the City of Dover under Certificate of Public Convenience and Necessity 90-CPCN-07.

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

Sediment and Erosion Control/Stormwater Management/Drainage

The Drainage and Stormwater Section is aware of existing drainage problems on Puncheon Run, downstream of this project. A downstream analysis will be required due to historic drainage problems in this area. If the downstream analysis indicates over-management of stormwater runoff is necessary to avoid exacerbating the downstream problems, over-management may include using infiltration BMPs to release the post development volume of runoff at the pre development level. If infiltration is not feasible for the site, over-detention of the runoff in ponds may be necessary. The Drainage and Stormwater Section recommends that the developer and the design consultant schedule a meeting with DNREC Drainage and Stormwater Section and Kent Conservation District to discuss the scope of a downstream analysis to be performed.

As of April 11, 2005, stormwater BMPs must also consider water quality as well as quantity in impaired water bodies – reducing nutrients through BMPs will also help achieve the future required TMDL nutrient reductions in the St. Jones River watershed.

Rare Species

DNREC has not surveyed this project site; therefore, a review of there database indicates that there are currently no records of state-rare or federally listed plants, animals or natural communities at this project site. However, they do have records of Black Vulture (*Coragyps atratus*) and Red-Headed Woodpecker (*Melanerpes erythrocephalus*) nesting in the forested riparian area of Isaacs Branch just south of the project site. It is possible that these state-rare birds (Red-Headed Woodpecker is State Endangered) also utilize the forested riparian area along Puncheon Run for roosting, foraging, and nesting. Therefore, It is recommended that the forested riparian buffer be left intact along Puncheon Run. If this is not feasible, then DNREC recommends that tree removal not occur April 1st to July 31st to minimize impacts to these two species as well as other wildlife species that utilize trees for nesting.

Nuisance Waterfowl

There are numerous stormwater management ponds in the site plan and they may attract waterfowl like resident Canada geese and mute swans. The applicant should consider reducing the number of ponds. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured lawns around ponds provide an attractive habitat for these species. DNREC recommends native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (50 feet) around the

perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Underground Storage Tanks

There are two inactive LUST site(s) located near the proposed project:

A.H. Angerstein, Facility # 1-000392, Project # K9306109
Delaware State News, Facility # 1-000492, Project # K9510253

No environmental impact is expected from the above inactive/active LUST site(s). However, should any underground storage tank or petroleum contaminated soil be discovered during construction, the Tank Management Branch must be notified as soon as possible. It is not anticipated that any construction specifications would be need to be changed due to petroleum contamination. However, should any unanticipated contamination be encountered and PVC pipe is being utilized, it will need to be changed to ductile steel with nitrile rubber gaskets in the contaminated areas.

Site Investigation and Restoration

There are 3 SIRB sites within a 1-mile radius of the proposed site:

- 1) Scott Paper Company (DE-060) is located north of the proposed site. In the 1970s, large amounts of latex were illegally discharged into the Puncheon Creek from this site. Since latex is considered to be a pollutant and not a contaminant, no further action was recommended after the clean up of the river. DNREC-SIRB foresees no negative impact on the proposed site.
- 2) Rodney Village Shopping Center (DE-1288) is located southeast of the proposed site. TCE was discovered in the ground water. Since ground water flows south east away from the proposed site, DNREC-SIRB foresees no negative impact.

- 3) Wyoming Dump (DE-276), located south of the proposed site, was a dumping area for trash. High PCB contamination was detected in Moores Lake. Since Ground Water flow is south east away from the proposed site, DNREC-SIRB foresees no negative impact on the proposed sit.

If you have any questions, please contact Babatunde Asere at 302-395-2600.

Solid Waste

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State's limited landfill resources and, to the extent possible, take steps to minimize the amount of construction waste associated with this development.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 25.0 tons (50,037.6 pounds) per year of VOC (volatile organic compounds), 20.7 tons (41,427.7 pounds) per year of NOx (nitrogen oxides), 15.3 tons (30,566.2 pounds) per year of SO₂ (sulfur dioxide), 1.4 ton (2,720.9 pounds) per year of fine particulates and 2,092.8 tons (4,185,581.3 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 10.1 tons (20,182.4 pounds) per year of VOC (volatile organic compounds), 1.1 ton (2,220.7 pounds) per year of NOx (nitrogen oxides), 0.9 ton (1,842.8 pounds) per year of SO₂ (sulfur dioxide), 1.2 ton (2,378.1 pounds) per year of fine particulates and 40.9 tons (81,815.1 pounds) per year of CO₂ (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 4.0 tons (7,998.9 pounds) per year of NOx (nitrogen oxides), 13.9 tons (27,822.1 pounds) per year of SO₂ (sulfur dioxide) and 2,051.9 tons (4,103,766.2 pounds) per year of CO₂ (carbon dioxide).

	VOC	NOx	SO ₂	PM _{2.5}	CO ₂
Mobile	25.0	20.7	15.3	1.4	2092.8
Residential	10.1	1.1	0.9	1.2	40.9

Electrical Power		4.0	13.9		2051.9
TOTAL	35.1	25.8	30.1	2.6	4185.6

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 4.0 tons of nitrogen oxides per year and 13.9 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, <http://www.energystar.gov/>:

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,
high performance windows,
controlled air infiltration,
upgraded heating and air conditioning systems,
tight duct systems and
upgraded water-heating equipment.”

The DNREC Energy Office is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. We highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths and links to mass transport system, and fund a lawnmower exchange program for their new occupants.

State Fire Marshal’s Office – Contact: Duane Fox 302-856-5298

No comment as this project is within the City of Dover.

Department of Agriculture - Contact: Milton Melendez 698-4500

The Delaware Department of Agriculture and Delaware Forest Service reserve the right to comment on the Kesselring Property application at this time. The proposed site for this subdivision may affect the future development of the West Dover Connector. The decision on West Dover Connector alignment is pending, and will not be made until sometime in the near future. In addition, the alignment of the proposed highway project and the proposed subdivision may or may not have a negative effect on a current Agricultural District in the area.

In addition, this site is a part of a “good recharge” area. DNREC has mapped all ground water potential recharge areas. A “good” rating is the second highest rating and designates an area as having important groundwater recharge qualities. Maintaining pervious cover in “Excellent” and “Good” recharge areas is crucial for the overall environmental health of our state and extremely important to efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of land designated as “excellent” and “good” recharge areas adversely impacts the future prospects for agriculture in Delaware.

The Department of Agriculture and the Delaware Forest Service look forward to providing technical comment on this project once the Delaware Department of Transportation completes the selection process for the West Dover Connector.

Delaware State Housing Authority – Contact Jimmy Atkins 739-4263

The proposal is to rezone 182 acres and develop 326 residential units located west of the Railroad right of way, west of New Burton Road, and adjacent to Puncheon Run, in the southwestern part of Dover. According to the *State Strategy Map*, the proposal is located in Investment Level 1 and 2 areas. As a general planning practice, DSHA encourages residential development in these areas where residents will have proximity to services, markets, and employment opportunities. Furthermore, the proposal targets units for first time homebuyers. According to the most recent real estate data collected by DSHA, the average home price in Dover is \$158,667. However, families earning 80% of Kent County’s median income only qualify for mortgages of \$147,099. The provision of units within reach of families earning at least 80% of Kent County’s median income would help increase housing opportunities for first time homebuyers.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of

State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

A handwritten signature in dark ink, reading "Constance C. Holland". The signature is fluid and cursive, with the first name "Constance" and last name "Holland" clearly legible.

Constance C. Holland, AICP
Director

CC: City of Dover